

# Ceptor *Animal Health News*

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Serving Ontario through veterinary science, technology transfer,  
outbreak investigation and animal health surveillance



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Ministry of Agriculture  
and Food  
Ministry of Rural Affairs

Ministère de l'Agriculture et  
de l'Alimentation  
Ministère des Affaires rurales



## Dairy Bull Calves – Ensuring an Equal Start to Life

**Ann Godkin, Veterinary Science and Policy Unit, OMAF and MRA**

Well-being of dairy cattle soon may be evaluated as part of a Dairy Cattle Care assessment. A pilot project has been completed at the request of Dairy Farmers of Canada. Further evaluation of its utility will be done this fall.

In advance of this initiative, veterinarians and producers may want to work together to look at calf

management practices that could be health and production bottle necks.

Anecdotally, herd visits suggest that management of newborn dairy bull calves is seldom evaluated by veterinarians. On some farms, bulls are handled the same as heifers and receive similar volumes of colostrum and milk and quality of housing. Many producers have made a decision to retain ownership for 7 to 10 days to ensure the bull calves are vigorous before moving them to a veal operation or a sales-barn. Likewise, calves may move “farm to farm” and avoid risks associated with commingling in sales barns. However, on some farms, the focus is primarily on heifer calves. Bulls may receive less attention and leave the farm as soon as possible after their birth.

Future welfare assessments may contain evaluations of bull calves because the Dairy Code of Practice lumps all dairy calves together. Certainly, an astute assessor would look at bull-calf management.

Mortality and morbidity in the veal industry are influenced by the management and care of bull calves in the first few days of their life. Inclusion of bull calves in our current dairy health programs may create opportunities for veterinarians or their animal health technicians to work with producers to improve bull-calf management. There's no need to wait for an assessment program – this could start today.

Do you know how your producer clients handle their bull calves? Can you help them to find a way to make excellent care and feeding of bull calves easier? This will improve the future for both the calf and the veal raiser.

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## Are Two Tests Better than One?

Ann Godkin, Veterinary Science and Policy Unit, OMAF and MRA, and  
David Kelton, Ontario Veterinary College, University of Guelph

Interpretation of test results is not always easy. A veterinarian recently relayed this scenario: "I have a herd that has had issues with Johne's and participated in the Johne's project. They just had their last program test through DHI (June 2013). On this June test, they had three new positives and one new suspicious. In February 2013, on their own herd test, they had four new positives and one new suspicious. Well, you probably guessed it; three of the test-positive cows from February 2013 (all less than 0.3) were negative on the June 2013 test. The 4<sup>th</sup> from February had been culled because she developed clinical diarrhea, which we agreed was likely Johne's. What should I tell them about these cows?"

Currently, many producers believe that removal of cows with positive Johne's tests will help their Johne's situation. They view a Johne's test as a tool to help decide which cows to cull. This becomes confusing when test results don't agree. The removal of cows likely to be shedding and clinical cows is warranted from an economic basis. There is, however, limited benefit in culling **all** cows with positive tests. In the Ontario program, we have emphasized that only cows with tests 1.0 or higher should be considered for culling. Cows with other test values should be monitored and/or retested at a later time, depending on the herd and cow situation. Culling all positives, regardless of Johne's score, could be detrimental to the herd.

Explaining discordant test results is an important role for veterinarians. If producers don't understand how to interpret and apply test results, future testing plans may be jeopardized.

The Johne's ELISA test detects antibodies to *Mycobacterium avium paratuberculosis* (MAP) that are made by the cow's immune system when it detects the infection. Antibody levels are low in early infection and higher as the cow ages and if the infection progresses. Very small amounts of antibody are present in the very large volume of milk produced by the cow, especially in cows with sub-clinical MAP infection. The current ELISA tests

are highly sensitive as we want them to detect infected cows as early as possible – thus the tests have been developed to detect minute amounts of antibody.

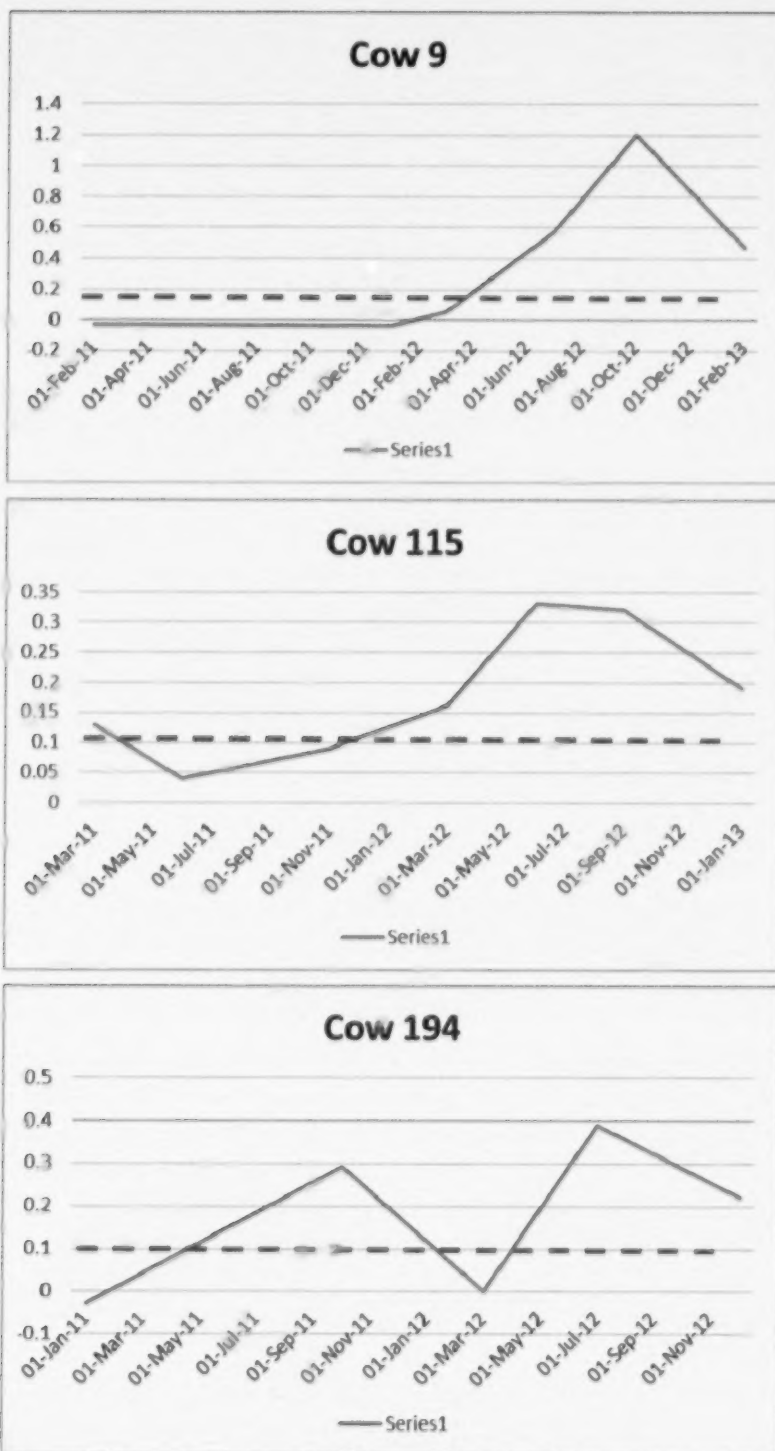
MAP antibody levels (concentrations) in milk fluctuate over time. Early in infection, or in quiescent infections, when antibody levels are low, the fluctuations in antibody levels may cross back and forth over the "cutpoint" for positive vs. negative. Consequently, if a cow is tested on "high" days, she will be positive. If she is tested on "low" days she will be negative. Examples of the test results of three cows tested repeatedly at variable intervals over several years are shown in **Figure 1**.

If the infection progresses, persistently high levels of antibody are likely. At the higher concentrations, despite normal fluctuations in titres, these cows are likely to be consistently classified as positive.

When results are reported to producers as "strong positives", it may lead them to believe that a lot of antibody is detected; however, while 10 to 20 times more antibody may be present in a "strong positive" compared to a "weak positive", the overall amount of antibody in the large volume of milk is actually miniscule. Thus, while the interpretational difference makes the differences sound large (strong vs weak), the actual antibody difference is relatively small.

When producers get discordant results, they think that the tests are probably "wrong" and they don't know whether to believe the negative or the positive result. However, the test is most likely accurately detecting antibody concentrations above or below the cutpoint resulting from expected fluctuations in antibody concentrations over time.

(Continued on pages 4 and 5)



**Figure 1.** Test results of three cows tested repeatedly over several years with mainly low-positive test results, indicating typical variability in test results. The dotted line (red) indicates the cutpoint of 0.1, the test score above which the test would be reported as positive.

(Continued on page 5)



What should be done with cows with discordant results? Cows whose results fluctuate in amounts that cross test-result classifications are likely not in an advanced stage of infection and, therefore, are at lower risk of shedding MAP to calves and herd mates. Keeping these cows and retesting them until their results are consistent is a good strategy for deciding if or when to remove them from the herd.

In the example herd, the high number of cows with fluctuating test results, and one cow with clinical signs of Johne's disease, indicates that Johne's disease is likely present in this herd. The number of test-positive cows commonly underestimates the number of truly infected cows. The veterinarian should advise this owner to ensure that all calves are protected from exposure to MAP. Calving time, manure, milk and colostrum management improvements are warranted as would be revealed by completing the Risk Assessment and Management Plan (RAMP).

In the example herd, where the disease is present but the prevalence is not clearly defined based on the herd tests so far, additional herd tests are recommended. Cows advance slowly through the stages of infection; therefore, protecting calves from exposure immediately and testing the herd six months to a year later will provide a better estimate of the herd prevalence and allow for more informed management decisions.

Test results on individual cows that change over time are not necessarily "wrong." Antibody levels fluctuate, especially for cows in the early or quiescent stages of the disease. Retesting at appropriate time intervals using the same test is the best strategy to control MAP in a dairy herd.

## Ocular Squamous Cell Carcinomas and Impact on Cattle Transport

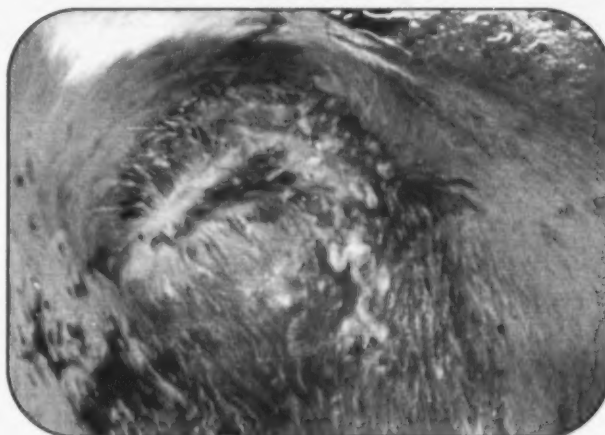
Alexandra Reid, Veterinary Inspection and Audit Unit,  
Food Inspection Branch, OMAF and MRA

Ocular squamous cell carcinomas (OSCCs) in cattle presented for slaughter are a concern for cattle welfare and transport regulatory reasons. These cattle would ideally be managed in the early stages and before an animal is transported. Recently the Canadian Food Inspection Agency (CFIA) revised its transport guidelines for OSCC and their recommendations for following up these incidents.

OSCC often starts at the corneoscleral junction, but may also form on the eyelids or other adnexal tissue. White-faced cattle are considered higher risk for OSCC development. Some breeds, such as Herefords, have heritable risk factors.

In a Stage 1 OSCC (**Figure 1**), the eye is intact and still capable of vision. The tumour is cauliflower-like *in situ* with no visible metastasis to surrounding tissue. An example is a primary tumour on the eyelid that has not spread onto the cornea or sclera. The CFIA recommends transporting cattle with

Stage 1 OSCC directly to slaughter or to a veterinarian for treatment.



**Figure 1.** This is a Stage 1 OSCC. The tumour is in the inner aspect of the lower eyelid, forcing the lid shut; the eye is intact and is capable of vision. The blood is post-mortem. This is the appropriate time to slaughter these animals or make management decisions on farm. This animal is approved for transport by the CFIA.

(Continued on page 6)

In Stage 2 (**Figure 2**), vision is absent from the affected eye. The OSCC may look similar to an open wound, with red, raised friable tissue. Blood or serum may be running from the tumour following trauma. The OSCC may show signs of infection with purulent exudate and odour. In Stage 3 (**Figure 3**) the tumour will have metastasized beyond the eye itself to involve periorbital tissues. **The CFIA does not recommend transport of cattle with Stage 2 or 3 OSCC.**

Sale of cattle with malignant tumours for human consumption is not permitted. Cattle with Stage 2 or 3 OSCC have a high rate of metastasis and may be compromised from long-standing infection at the tumour site. Additionally, CFIA now recommends

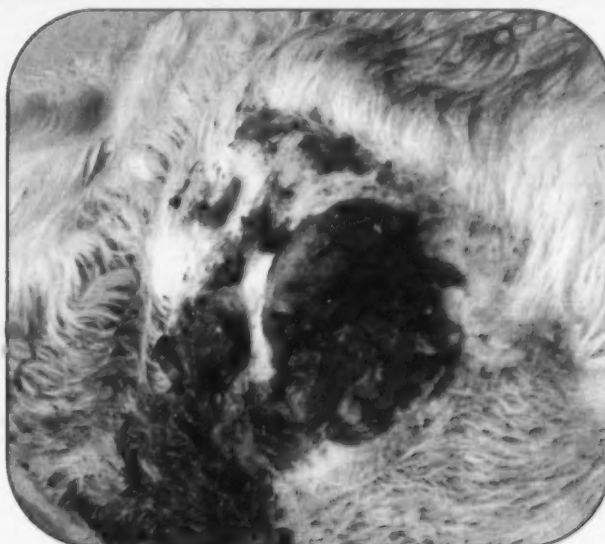
that cattle with severe OSCCs be reported to regional animal welfare authorities.

If tissues beyond the orbit are affected, cachexia or neurological signs such as Horner's syndrome occur, the OSCC is classified as Stage 4. **Stage 4 affected cattle are not fit for transport and should be humanely euthanized on farm.**

Emphasis on early detection, seeking veterinary advice and removal of small tumours is critical, as is transporting any affected animal in a timely manner. As OSCC has a genetic component in certain breeds, the value of retaining and breeding affected cattle should be reviewed.



**Figure 2.** This is a Stage 2 OSCC. This is an animal welfare concern and will be rejected for slaughter. Note the trauma to the neoplastic tissue, with blood and purulent exudate.



**Figure 3.** This is an example of a Stage 3/4 OSCC. The eye was enucleated but the tumour metastasized into periorbital tissue to fill the socket. There was evidence of metastatic spread throughout the body. This is an animal welfare issue due to the prolonged time course of this lesion and a transportation concern.

## Neck Strap and Brisket Rail for Free Stalls

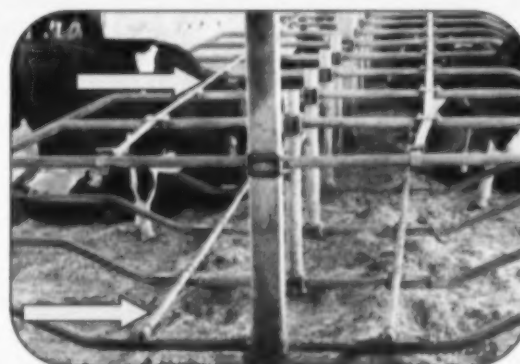
Neil Anderson, Veterinary Science and Policy Unit, OMAF and MRA

A Huron County dairy producer sought a way to prevent injuries caused by the neck rail during “escapes” forward through his free stalls. He reasoned that a flexible neck restraint would spare back injury and that a rigid brisket rail would discourage cows from crawling forward before rising.

After 18 months with no injuries, he happily reports success. He has seen a ‘skittish’ heifer, or a cow pestered by another in heat, escape safely through the stalls. However, the upward flexibility of the nylon strap spared the cows from injury. A Perth County producer reports similar success after modifying his stalls late in 2012.

The location of the brisket rail over the brisket locator in the Huron County barn appears in **Figure 1**. In this installation, the rail inhibits the cow’s forward stride while rising. The Perth County producer mounted his brisket rail further forward and his cows have space to take the stride. The structural stability of the loops appears unchanged.

Both producers made the alterations cautiously, modifying a few stalls and observing results before completing changes in an entire pen. The Perth County barn has a three-row configuration. Since



**Figure 1.** Two modifications to the head-to-head free stalls successfully prevented injuries. The neck rail was moved to the bottom pipe of the loop to make a brisket rail. A nylon neck strap was installed at the location of the former neck rail.

no escapes occurred through the free stalls facing the walk alley along the outside wall, the producer did not modify this row of stalls.

### Acknowledgement

The author thanks Bill Krul (Territory Manager, CANARM - BSM Agri Ltd., Arthur, ON) and the producers for sharing this innovation.

## Statistics on Ontario Veterinarians Conducting RAMPS as Part of the Ontario Johnne's Education and Management Assistance Program

Ann Godkin, Veterinary Science and Policy Unit, OMAF and MRA, and  
Nicole Perkins, Johnne's Program Co-ordinator

Veterinary involvement has been very important for the success of the Ontario Johnne's program. Veterinary practitioners have conducted specific activities, such as the Risk Assessment and Management Plans (RAMPs), helped promote the program to their clients and have helped interpret test results.

**Table 1** shows the participation rate by veterinarian and by clinic. Achieving a high number of completed RAMPs depends on the number of dairy herds served by a veterinarian or clinic, but also reflects the

rate of recruitment to the program.

This introductory program was designed to nudge veterinarians to include a Johnne's Assessment and a calf health program into their dairy herd health programs. The results to date show that about 2500 Ontario producers were engaged and partnered with their veterinarian to complete a RAMP for their farm. Thanks to all participating veterinarians and their dairy clients for their enthusiasm for this aspect of the Ontario Johnne's program.

*(Continued on page 8)*

**Table 1. Distribution of the Number of RAMPS Completed per Participating Veterinarian or Clinic, as of July 1<sup>st</sup> 2013**

		Percentiles for Numbers of Completed RAMPS			
	Average Number of RAMPS Completed	25 <sup>th</sup>	50 <sup>th</sup>	75 <sup>th</sup>	Most
182 veterinarians	14 per veterinarian	5	12	21	66
97 clinics	26 per clinic	5	19	32	142

## **Developing Effective Sensory Enrichment for Growing Hogs**

*Heather Neureuther, OMAF and MRA Summer Student, and  
Paisley Canning, Ontario Veterinary College, University of Guelph,  
Tim Blackwell, Veterinary Science and Policy Unit, OMAF and MRA,  
and Keith Robbins, Ontario Pork*

The draft Canadian Code of Practice for the Care and Handling of Pigs states that “pigs must be provided with some type of environmental enrichment”. The Code recommends providing straw or installing suspended toys as appropriate ways to accomplish this goal.<sup>(2)</sup>

Over the years, producers have used various objects as enrichment for growing pigs. Some of the more common devices include old tires, bowling balls, and chains hung from the ceiling. Despite their popularity when first introduced, producers report that pigs lose interest in these toys shortly after their addition to the pen, particularly if the toy becomes soiled with urine or feces. Some toys, such as steel-belted tires, may pose a risk to pigs if the steel pieces become lodged in the pig's tongue and oral cavity.

A 2005 United Kingdom study on swine environmental enrichment by Scott and colleagues, demonstrated that straw effectively occupied pigs' attention over time.<sup>(3)</sup> However, providing straw is not practical with liquid manure systems. Therefore, as an alternative to straw, the study suggests the most successful and effective toys possess two key properties: 1) toys should be able to be manipulated or even destroyed by the pigs, and 2) toys should remain free from contamination with urine or feces.<sup>(4)</sup> While destructible toys remain intriguing and novel to the pigs, they place additional demands on the producer to frequently replace toys.



**Figure 1.** Rooting style toy.

We have been conducting a pilot project to identify toys that sustain pigs' attention and provide environmental enrichment, while not requiring extensive repairs or maintenance by the stockperson.

*(Continued on page 9)*



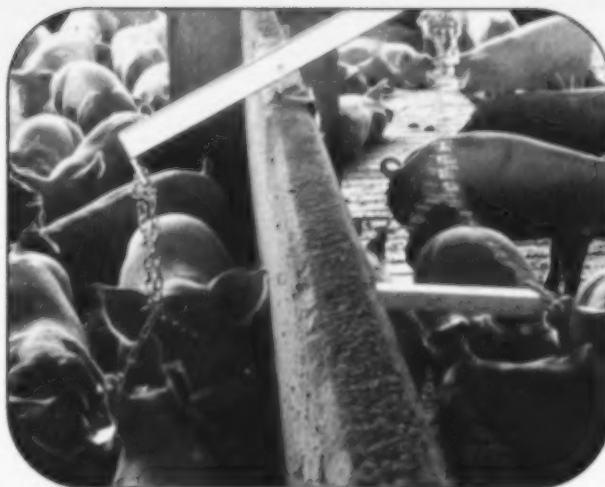
Beginning in July 2012, Ontario Pork provided Farm Innovation Program funding to install rooting and/or chewing toys on thirteen Ontario swine farms. The farms varied in style of barn as well as in the genetics and ages of pigs. The rooting style toy consisted of a four-foot-long piece of wood inside a PVC pipe attached to the pen wall (**Figure 1**). The second style of toy was a "teeter-totter" device that was mounted on top of a pen divider and had attachments (either a block of wood or a rubber "Kong" dog toy) hanging from either arm of the teeter-totter into adjacent pens (**Figure 2**).

During our pilot project, producers recorded the number of pigs playing with the toy in the morning and in the evening.

Preliminary analysis has identified several trends. The greatest number of pigs played with the toys during the first week after toy installation. On average, during that first week, five or more pigs played with the toy each day of the study. Some farms had 20 or more pigs using the toy on a single day during the first week. However, fewer pigs interacted with the toy in the second week post-installation. The majority of farms reported a decrease of 30-50% in the number of pigs interacting with the toys from week one to week two. It appears that there are unidentified pen- or farm-specific factors that affect pigs' responses to the environmental enrichment devices we provided.

During the four months of on-farm observations, most observers (67%) recorded only one or two days per month where no pigs were observed playing with the toys. This implies that the toys tested were capable of sustaining pigs' attention over several weeks. It is important to note, however, that some producers did have to replace or re-install toys when the pigs occasionally caused damage to them. Further trials will focus on improving the durability of these types of toys.

Input from the participating farmers revealed that the teeter-totter toy was favoured by pigs over the rooting toy. The wood inside the PVC pipe for the rooting toy rested on the pen floor and quickly became soiled with urine and feces. This confirmed similar findings from the previously mentioned studies.



**Figure 2.** Teeter-totter with wood toy attachments.

Additional investigations are underway to test whether devices that produce some noise sustain pigs' interest for longer periods of time. Another question to address is, do all pigs in a pen play with the device or are only certain individuals inclined to interact with the toys? Whether or not environmental enrichment devices will produce any production advantages has yet to be determined. At present, the challenge is to identify toy designs that maximize pig interest and minimize inputs by the owner to comply with the draft Code of Practice.

1. EUROPA. *European Commission: Animal Welfare on the Farm—Pigs 2011*. [http://ec.europa.eu/food/animal/welfare/farm/pigs\\_en.htm](http://ec.europa.eu/food/animal/welfare/farm/pigs_en.htm) Last accessed July 19, 2013.
2. DRAFT—*Code of Practice for the Care and Handling of Pigs*. National Farm Animal Care Council 2013: 17.
3. Scott K, Taylor L, Gill B, Edwards S. Influence of different types of environmental enrichment on the behaviour of finishing pigs in two different housing systems. *Applied Animal Behaviour* 2006; 222-229.
4. BPEX. *Environmental Enrichment for Pigs*. University of Bristol. <http://www.bpex.org/downloads/301028/298574/Environment%20Enrichment%20for%20Pigs.pdf> Last accessed July 19, 2013.

# Sudden Death in Pigs—Think with Your Head and Don't Forget the Heart

Kathy Zurbrigg, Veterinary Science and Policy Unit, OMAF and MRA, and  
Tony van Dreumel, Animal Health Laboratory, University of Guelph

For a term that seems obvious, “sudden death” appears to have a variety of definitions, all of which are dependent on the chance event that clinical signs are observed prior to death. It can be challenging to determine the cause. Routinely on necropsy veterinarians look for enteric conditions, respiratory infections, trauma and systemic disease but frequently find little more than a normal appearing dead pig with perhaps some questionable pulmonary edema.

In livestock disease and pathology textbooks it is frequently stated that heart lesions are “common” in the pig, and heart lesions appear in the list of differential diagnoses for sudden death. However, the reality is that the heart is overlooked by many swine veterinarians, but should be examined as part of any investigation into sudden death in swine.

Pigs have a variety of factors that predispose them to cardiac failure, including: a small heart volume, low heart-weight to body-weight ratio, and increased myocardial sensitivity to oxygen deficiency<sup>(1,2)</sup>, as well as numerous pathological conditions, such as endocarditis and sub-aortic fibrosis. These physiologic and pathologic factors can easily lead to an overload of the circulatory system and result in acute cardiac failure. Add to this other risk factors that increase the heart rate and strength of



**Figure 1.** Enlarged (left) and normal (right) swine hearts.



**Figure 2.** Heart with left ventricular hypertrophy and right ventricular dilation (ratio greater than 3:1).

contractility, such as high ambient temperature, fighting, restraint, parturition, loading for transport, and porcine cardiac failure is understandable.

Some cardiac defects can be fairly easy to diagnose on gross post-mortem examination. Other more subtle lesions are best left to a trained pathologist to determine. Enlarged hearts are straight-forward to identify (**Figure 1**), provided there is a normal matched heart for comparison. Left ventricular hypertrophy and right ventricular dilation (**Figure 2**) become more apparent after one has opened a number of normal hearts during post-mortem examinations for non-cardiac pathologies.

Tony van Dreumel, DVM, Animal Health Laboratory, University of Guelph, suggests the following routine for examining the heart:

- Remove the heart from the pluck and cut through the heart approximately 1/3 from the apex.

*(Continued on page 11)*

- Examine ventricle wall thickness, which should be a 3:1 ratio for left:right ventricle wall thickness.
- Cut open both the left and right ventricles to examine walls for fibrosis and hemorrhage and the AV valves for nodules, fibrosis and translucency (valves should not be opaque as in **Figure 3**).

Identifying lesions in a fresh heart can be more difficult than in a heart following fixation in formalin. Veterinarians are encouraged to place the whole heart in formalin for a day before examining for lesions or to send in the entire heart to AHL for examination if other samples are being sent in for diagnosis in a sudden death case.

1. Friendship R, Henry S. Cardiovascular system, hematology and clinical chemistry. In: Straw BE, ed. *Diseases of Swine* 7<sup>th</sup> ed. Ames, Iowa: Iowa State University Press, 1992:3-5.
2. Drolet R, D'Allaire S, Chagnon M. Some observations on cardiac failure in sows. *Canadian Veterinary Journal* 1992;33:325-329.



**Figure 3.** Right AV valve—non translucent, thickened, marked nodularity.

## Obsolete Pesticide Collection— Coming to Ontario this Fall

CleanFARMS obsolete pesticide collection is coming to Ontario this fall. The program offers farmers an environmentally responsible way to dispose of old or unwanted agricultural pesticides and animal health medications at **no charge**.

### What Products will be accepted?

- Obsolete or unwanted agricultural pesticides (identified with a Pest Control Product number or label)
- Animal health medications that are used in an agricultural context (identified with a DIN number, Ser. Number or Pest Control Product number or label).
- Sharps are **not** included (although they were in past collections).

### New this Year

Participants are asked to pre-register the products they plan to dispose of. Pre-registration details will be available soon on the website.

### Dates for Obsolete Pesticide Collection

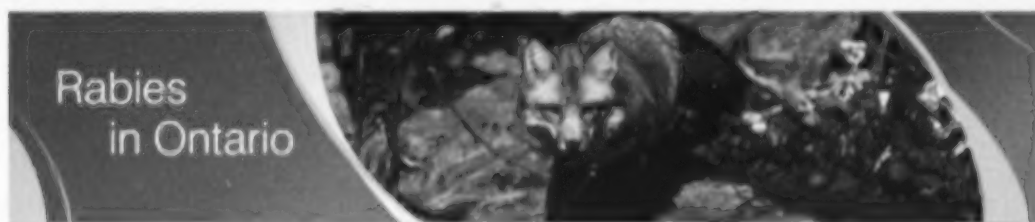
October 15—17, 2013  
October 22—25, 2013

### Collection Sites

Collection sites will be distributed across the province, predominantly at pesticide retail outlets.

To find the locations in your area, please refer to the CleanFARMS website  
[www.cleanfarms.ca/?q=programs\\_obsolete\\_pesticide\\_collection](http://www.cleanfarms.ca/?q=programs_obsolete_pesticide_collection)

Producers who are unsure whether a product fits the scope of the collection can call CleanFARMS at 1-877-622-4460 ext. 2223.



### Ontario Ministry of Natural Resources

The latest issue of the Rabies Reporter (Volume 24, Number 1) is now available on the Ministry of Natural Resources website at [www.mnr.gov.on.ca/en/Business/Rabies/2ColumnSubPage/196811.html](http://www.mnr.gov.on.ca/en/Business/Rabies/2ColumnSubPage/196811.html)

Visit the Rabies in Ontario website to learn more about the rabies control programs at [www.ontario.ca/rabies](http://www.ontario.ca/rabies)

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### Cornell University—Department of Animal Science

#### NYS 4-H Youth Development Program

This website provides information for producers and 4-H clubs. Resources on beef, birds, cavies, dairy, dogs, goats, horses, pets, rabbits, sheep, swine, science and technology, and veterinary science, are available under the "Animal Programs" tab.

Visit <http://ansci.cornell.edu/4H/dairycattle/dairyresources.html>

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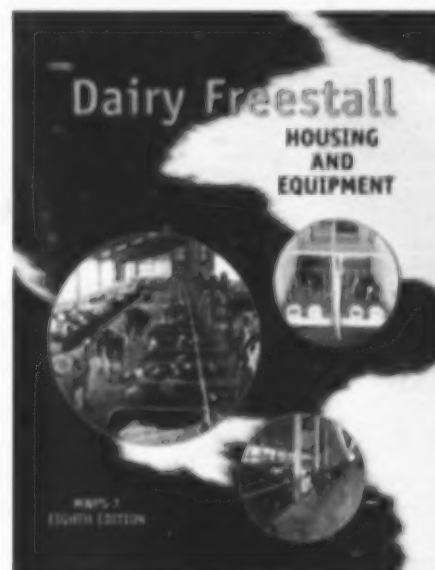
### MidWest Plan Service, Iowa State University

A new Midwest Dairy Freestall Manual is now available.

Dairy Freestall Housing and Equipment, 8th edition, is 232-pages, 8 1/2 x 11, softcover, and generously illustrated. The cost is \$35.00. ISBN 0-89373-109-9

Topics include:

- Planning and Developing Total Dairy Facilities
- Dairy Replacement Housing
- Designing Facilities for the Milking Herd
- Milking Center Design
- Housing for Transition and Special Needs Cows
- Building Environment
- Manure and Effluent Management
- Feeding Facilities
- Utilities



For more information or to order a copy, refer to [www.mwps.org](http://www.mwps.org)

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(Continued on page 13)



## Available Resources (continued)

### Beta Lactamase Testing

Ontario practitioners are requesting *Beta Lactamase* tests with bacterial culture to help determine antimicrobial resistance of mastitis pathogens, for example. The Centers for Disease Control and Prevention in Atlanta, Georgia, provides useful information about beta lactamases. An on-line presentation includes text, video clips and graphics to describe modes and mechanisms of action, test methods, and unique features associated with gram-positive and gram-negative organisms. Overall, the tutorial may help with test interpretation or making treatment decisions.

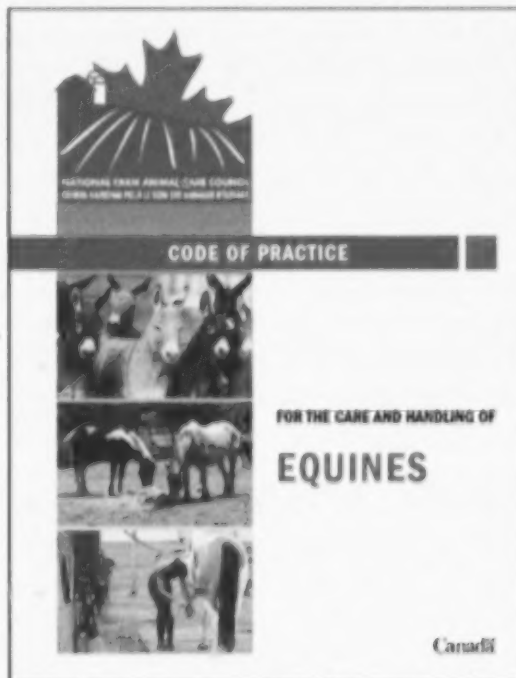
Here is the link to the four modules: [ftp://ftp.cdc.gov/pub/infectious\\_diseases/artesting/betalactam.swf](ftp://ftp.cdc.gov/pub/infectious_diseases/artesting/betalactam.swf)

### Code of Practice for the Care and Handling of Equines

Equine Canada and the National Farm Animal Care Council announced the release of this new Code of Practice in June. This Code of Practice replaces the one published in 1998 by the Canadian Agri-Food Research Council.

"The most significant influence on the welfare of equines is the care and management provided by the person(s) responsible for their daily care. Those responsible for equines should consider the following factors:

- shelter
- feed and water to maintain health and vigour
- freedom of movement and exercise for most normal behaviours
- the company of other equines
- veterinary care, diagnosis and treatment, disease control and prevention
- emergency preparedness for fire, natural disaster, and the disruption of feed supplies
- hoof care
- end of life."



The Code is available for download at [www.nfacc.ca/codes-of-practice/equine](http://www.nfacc.ca/codes-of-practice/equine)

### Slow Ideas

Atul Gawande wrote about extending and fostering the adoption of ideas in the *Annals of Medicine* section of the July 29, 2013 issue of the New Yorker. "Some innovations spread fast. How do you speed the ones that don't?" form the basis of his essay. His examples from human medicine include anaesthesia, sterile surgical technique, oral fluid replacement therapy, and newborn infant care. He argues that awareness doesn't do it. Personal contact, trust and hands-on training are key elements. His essay should be inspirational reading for veterinary practitioners and animal health technicians. Here's the link.

[www.newyorker.com/reporting/2013/07/29/130729fa\\_fact\\_gawande](http://www.newyorker.com/reporting/2013/07/29/130729fa_fact_gawande)

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## Online Training—Webinars and Courses

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### DAIReXNET Webinars—

<http://www.extension.org/pages/29156/upcoming-dairy-cattle-webinars> ➡

No webinars listed at this time.

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### Hoard's Dairyman and University of Illinois Webinars—

<http://www.hoards.com/webinars> ➡

August 12, 2013      **Is Robotic Milking a Good Deal?**

12:00-1:00 p.m.

Central Time, Larry Tranel, Iowa State University

September 9, 2013      **New Concepts in Mastitis Control**

12:00-1:00 p.m. Central Time, Pam Ruegg, University of Wisconsin-Madison

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### Technology Tuesdays Webinar Series—"Dairy Systems Planning and Building"

**Penn State College of Agricultural Sciences**

<http://extension.psu.edu/animals/dairy/health/educational-programs/technology> ➡

There are currently no events scheduled for this course.

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### University of Illinois Online Dairy Courses—<http://online.ansci.illinois.edu/> ➡

Fall Courses include:

1. Advanced Reproductive Management (ANSC 437)
2. Dairy Ration Formulation and Balancing (ANSC 499)

Registration is now open.

To review the class schedules, topics, and enrollment details, visit the website.

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### Dairy Cattle Reproduction Council—[www.dccouncil.org](http://www.dccouncil.org) ➡

The Dairy Cattle Reproduction Council (DCRC) is presenting a series of webinars highlighting presentations from the 2012 DCRC Annual Meeting. Upcoming webinars include:

August 1, 2013      Heifer Development Focused on Early, Successful Reproduction, by  
Dr. Robert Corbett, Dairy Health Consultation  
12:00 p.m. Central

September 26, 2013      Effects of Resynchronization on Fertility and Economics, by Dr. Todd Bilby

## Continuing Education/Coming Events

- August 9, 2013 54th Annual George A. Young Swine Health and Management Conference—Achieving the Best of Production Through Knowledge, Veterinary Diagnostic Center, University of Nebraska, Lincoln, Nebraska. <http://vbms.unl.edu/gysc>
- August 11-14, 2013 The 17th International Symposium and the 9th International Conference on Lameness in Ruminants, hosted by the University of Bristol School of Veterinary Sciences, Bristol Marriott City Centre Hotel, Bristol, United Kingdom. [www.bristol.ac.uk/vetscience/lamenessconf](http://www.bristol.ac.uk/vetscience/lamenessconf)
- September 9-12, 2013 SafePork 2013, DoubleTree by Hilton Hotel, Portland, Maine. [www.safepork2013.com](http://www.safepork2013.com)
- September 14-17, 2013 Allen D. Lemay Swine Conference, St. Paul RiverCentre, St. Paul, Minnesota. [www.LemaySwineConference.org](http://www.LemaySwineConference.org)
- September 19-21, 2013 46th Annual Conference of the American Association of Bovine Practitioners, meeting jointly with the American Association of Small Ruminant Practitioners, Milwaukee Convention Centre, Milwaukee, Wisconsin. [www.aabp.org/meeting/default.asp](http://www.aabp.org/meeting/default.asp)
- September 23-25, 2013 6th Asian Pig Veterinary Society Congress (APVS 2013), White Palace Convention Center, Ho Chi Minh City, Vietnam. [www.apvs2013.vn](http://www.apvs2013.vn)
- September 23-26, 2013 American Dairy Science Association® (ADSA®) Discover Conference—Dairy Feed Efficiency, Northern Illinois University Conference Center, Naperville, Illinois. [www.adsa.org/Meetings/DiscoverConferences/26thDiscoverConference.aspx](http://www.adsa.org/Meetings/DiscoverConferences/26thDiscoverConference.aspx)
- October 18 & 19, 2013 Ontario Association of Swine Veterinarians Fall Conference, Pillar and Post, Niagara-on-the-Lake, Ontario. [www.oasn.ca/](http://www.oasn.ca/)
- November 7-9, 2013 Dairy Sheep Association of North America Symposium, Cambridge Hotel and Conference Centre, Cambridge, Ontario. [www.dsana.org/symposia.html](http://www.dsana.org/symposia.html)
- November 20 & 21, 2013 Ontario Association of Bovine Practitioners (OABP) Fall Continuing Education Program, Holiday Inn, Guelph, Ontario. [www.oabp.ca](http://www.oabp.ca)
- December 4 & 5, 2013 Calf Congress, a part of Cornell University ProDairy Program, Rochester, New York. <http://ansci.cornell.edu/prodairy/conferences.html>
- December 7 & 8, 2013 North American PRRS Symposium, InterContinental Hotel, Chicago, Illinois. For information, e-mail [reaves@vet.k-state.edu](mailto:reaves@vet.k-state.edu)
- December 7-11, 2013 American Association of Equine Practitioners 59th Annual Convention, Gaylord Opryland Resort and Convention Center, Nashville, Tennessee. [www.aaep.org/convention.htm](http://www.aaep.org/convention.htm)
- March 1-4, 2014 45th Annual Meeting of the American Association of Swine Veterinarians, Sheraton Dallas Hotel, Dallas, Texas. [www.aasv.org/annmtg](http://www.aasv.org/annmtg)
- June 8-11, 2014 23rd International Pig Veterinary Society Congress, Moon Palace Golf & Spa Resort, Cancun, Mexico. [www.ipvs2014.org](http://www.ipvs2014.org)

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Ann Godkin, Veterinary Science and Policy Unit, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs, Unit 10, 6484 Wellington Road 7, Elora, ON N0B 1S0

Tel.: (519) 846-3409 Fax: (519) 846-8178 E-mail: [ann.godkin@ontario.ca](mailto:ann.godkin@ontario.ca)

Comments: .....

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**Deadline for next issue: September 12, 2013**



Ministry of Agriculture and Food  
Ministry of Rural Affairs

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